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APPLICANT : ATR ADAPTIVE COMMUNICATIONS RES LAB;

INVENTOR : OHIRA TAKASHI;

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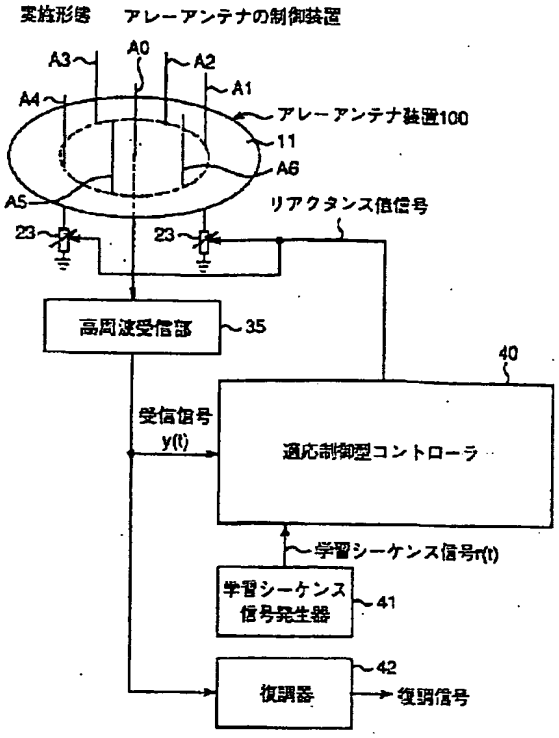
TITLE : CONTROLLER AND CONTROLLING METHOD OF ARRAY ANTENNA



ABSTRACT : PROBLEM TO BE SOLVED: To perform adaptive control of an ESPAR antenna such that a main beam is directed toward a desired wave and null is directed toward an interference wave with no need for imparting the incoming angle of receiving signal previously.

SOLUTION: The controller 40 performing adaptive control of an array antenna unit 100 of ESPAR antenna comprising one feed antenna element A0 and six parasitic variable reactance elements A1-A6 executes adaptive control shown on Fig. 8 based on a receiving signal y(t) at the time when a learning sequence signal included in a radio signal transmitted from the opposite transmitter is received by the feed antenna element A0 of the array antenna unit 100, and a learning sequence signal r(t) generated from a learning sequence signal generator 41 and identical to the learning sequence signal to calculate and set the reactance value xm of each variable reactance element A1-A6 for directing the main beam of the array antenna unit 100 in the direction of desired wave and directing null in the direction of interference wave.

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